Docket No.: 145642000100
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Patent Application of:
Narayan D. PATIL et al.

Serial No.: 10/683,538

Filing Date: October 10, 2003

For: SYSTEM AND METHOD FOR PROCESSING SHREDDED VEGETABLES

Examiner: T. Matthews

Group Art Unit: 3653

APPEAL BRIEF

MAIL STOP: APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Madam:

This brief is in furtherance of the Notice of Appeal, filed in this case on January 8, 2009. The fees required under 37 C.F.R. § 41.20(b)(2) and any required petition for extension of time for filing this brief and fees therefore, are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF. Applicants note, however, that a fee for the Appeal Brief is not required, because fees were paid for an early-filed Appeal Brief, prior to the Examiner re-opening prosecution.

This brief contains items under the following headings as required by 37 C.F.R. § 41.37 and M.P.E.P. § 1205:

I. Real Party in Interest
II. Related Appeals and Interferences
III. Status of Claims
IV. Status of Amendments
V. Summary of Claimed Subject Matter
VI. Grounds of Rejection to be Reviewed on Appeal

VII. Arguments
VIII. Claims Appendix
IX. Evidence Appendix
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Appendix A. Claims

I. REAL PARTY IN INTEREST

The real party in interest for this appeal is:

Dole Fresh Vegetables, Inc. of Salinas, California.

II. RELATED APPEALS, INTERFERENCES, AND JUDICIAL PROCEEDINGS

There are no other appeals, interferences, or judicial proceedings that will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

A. Total Number of Claims in Application

There are 21 claims pending in the application.

B. Current Status of Claims

1. Claims canceled: 3.
2. Claims withdrawn from consideration but not canceled: None.
3. Claims pending: 1, 3-16, and 19-24.
4. Claims allowed: None.
5. Claims rejected: 1, 3-16, and 19-24.
6. Claims objected to: None.

C. Claims on Appeal

The claims on appeal are claims 1, 3-16, and 19-24.

IV. STATUS OF AMENDMENTS

No Amendments remain outstanding.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Claim 1 recites a system for separating shredded vegetable pieces. (Page 2, paragraph 8, lines 1-2; page 2, paragraph 9, lines 1-2; FIG. 1A, system 10.) The system includes a slicer configured to cut a vegetable having a leaf portion and a core portion into a plurality of pieces of the leaf and core portions to form a mixture of leaf pieces and core pieces. (Pages 2 and 3, paragraph 9, lines 2-8; page 3, paragraph 10, lines 1-2; FIG. 1A, slicer 16.) The system also includes a sorting mechanism having an infeed end and a discharge end. (Page 3, paragraph 12, lines 1-2; page 5, paragraph 18, lines 3-4; FIGs. 1A and 2B, sorting mechanism 20.) The sorting mechanism comprises one or more screens having a plurality of screen apertures. (Page 4, paragraph 4, lines 2-8; FIGs. 2A and 2B, screen 24, aperture 28.) The plurality of screen apertures have a shape and size suitable to separate the core pieces from the mixture based on their dimensions. (Page 4, paragraph 15, lines 1-6; page 4, paragraph 16, lines 1-17.)

Claim 15 recites a system for separating shredded vegetable pieces. (Page 2, paragraph 8, lines 1-2; page 2, paragraph 9, lines 1-2; FIG. 1A, system 10.) The system includes a slicer configured to cut a vegetable having a leaf portion and a core portion into a plurality of leaf pieces and core pieces to form a mixture of leaf and core pieces. (Pages 2 and 3, paragraph 9, lines 2-8; page 3, paragraph 10, lines 1-2; FIG. 1A, slicer 16.) The system also includes one or more screens having a plurality of screen apertures. (Page 4, paragraph 4, lines 2-8; FIGs. 2A and 2B, screen 24, aperture 28.) The plurality of screen apertures have a shape and size suitable to separate core pieces from the mixture based on their dimensions. (Page 4, paragraph 15, lines 1-6; page4, paragraph 16, lines 1-17.) The system also includes a feed shaker that transports the mixture from the slicer to the sorting mechanism. (Page 3, paragraph 10, lines 1-5; FIG. 1A, feed shaker 18.)

Claim 16 recites a mechanical method for separating shredded vegetable pieces. (Page 2, paragraph 8, lines 1-2; page 2, paragraph 9, lines 1-2) A vegetable having a leaf portion and a core portion is provided. (Pages 2 and 3, paragraph 9, lines 2-8; page 3, paragraph 10, lines 1-2.)

The leaf and core portions are cut into a plurality of leaf pieces and core pieces to form a mixture of leaf and core pieces. (Pages 2 and 3, paragraph 9, lines 2-8; page 3, paragraph 10, lines 1-2.) The mixture is fed to a sorting mechanism having an infeed end, a discharge end, and one or more screens. (Page 3, paragraph 12, lines 1-2; page 5, paragraph 18, lines 3-4.) The one or more screens have a plurality of screen apertures. (Page 4, paragraph 4, lines 2-8.) Core pieces are separated from the mixture based on their dimensions using the one or more screens. (Page 4, paragraph 15, lines 1-6; page 4, paragraph 16, lines 1-17.)

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Whether claims 1, 3-8, 14-16, 19-24 are patentable under 35 U.S.C. § 103(a) over U.S. Patent No. 5,727,690 (the Hofmeister reference) in view of U.S. Patent No. 5,507,396 (the Hauch reference).

B. Whether claims 9-13 are patentable under 35 U.S.C. § 103(a) over the Hofmeister reference in view of the Hauch reference and in further view of U.S. Patent No. 6,637,600 (the Miyamoto reference).

VII. ARGUMENT

Claims 1, 3-16, and 19-24 stand rejected. Applicants request reversal.

A. Claims 1, 3-8, 14-16, and 19-24 Rejected Under 35 U.S.C. § 103(a)

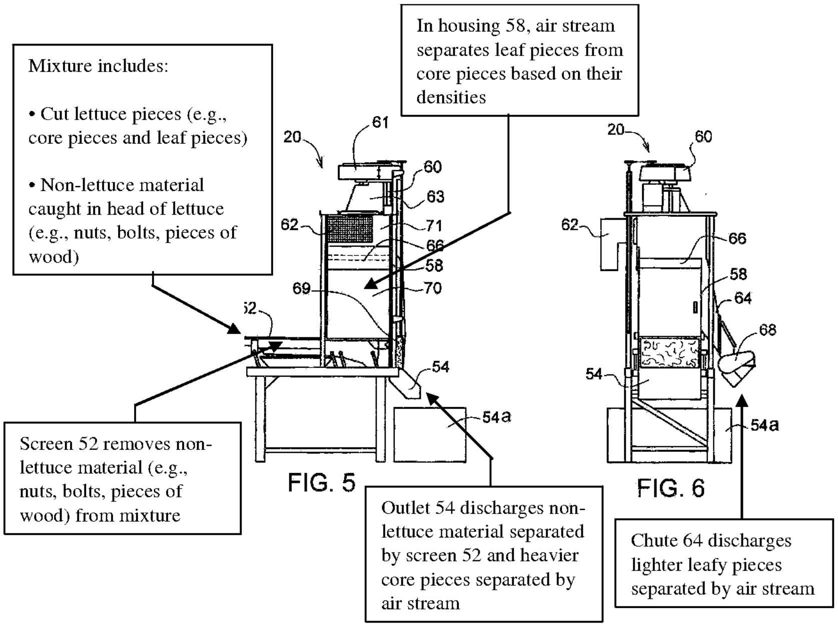
1. Hofmeister Fails to Disclose Screens to Separate Shredded Vegetable Pieces

The Examiner asserts that the Hofmeister reference discloses "one or more screens having a plurality of screen apertures...suitable for separating shredded vegetable pieces of various dimensions." The Examiner cited to column 4, lines 22-38, for support.

As an initial matter, Applicants note that independent claims 1, 15, and 16 do note merely recite separating shredded vegetable pieces. Instead, claims 1, 15, and 16 recite that **core pieces are separated from a mixture of leaf pieces and core pieces** based on their dimensions using one or more screens.

As has been maintained by Applicants throughout prosecution, the vibrating screen disclosed in the Hofmeister reference does not separate **core pieces from a mixture of leaf pieces and core pieces**. Instead, the vibrating screen is used to separate non-lettuce material (e.g., nuts, bolts, pieces of wood, etc.) from lettuce pieces. The core pieces and leaf pieces are then separated **based on their densities using an air stream** in a vertical housing unit rather than the vibrating screen.

In particular, column 4, lines 22-38, to which the Examiner cited, refers to figures 5 and 6, which are reproduced below with annotations:



In housing 58, air stream separates leaf pieces from core pieces based on their densities

Mixture includes:

- Cut lettuce pieces (e.g., core pieces and leaf pieces)
- Non-lettuce material caught in head of lettuce (e.g., nuts, bolts, pieces of wood)

Screen 52 removes non-lettuce material (e.g., nuts, bolts, pieces of wood) from mixture

FIG. 5

Outlet 54 discharges non-lettuce material separated by screen 52 and heavier core pieces separated by air stream

FIG. 6

Chute 64 discharges lighter leafy pieces separated by air stream

Column 4, line 31 states, "The outlet hopper 54a receives the cut out cores, hearts, ribs, and veins of the lettuce as well as other undesirable solids, such as nuts, bolts, pieces of wood and other types of material which have been found in the lettuce which have been picked up both form the field where the lettuce is grown as well as those solids which have been picked up during the transporting of the lettuce from the field to the processing plant."

The two types of waste found in outlet hopper 54a come from two distinct places. The undesirable lettuce material (i.e., cut out cores, hearts, ribs, and veins) is separated from the desirable lettuce material in the **air stream separation device**, where due to their densities these pieces fall to the bottom. The non-lettuce material (i.e., nuts, bolts, pieces of wood, etc.) is separated from the lettuce mixture by **vibrating screen 52**.

In particular, column 4, line 28 states, "An outlet hopper 54a is disposed beneath the vibrating screen 52 to receive any undesirable heavy material which may be **caught in the head of lettuce**." First, it is unreasonable to conclude from this disclosure that the vibrating screen 52 separates core pieces because core pieces are **not caught in a head of lettuce**. Instead, the term "heavy material" in this cited portion refers to the non-lettuce material (i.e., nuts, bolts, pieces of wood, etc.) that can get **caught in a head of lettuce** during harvesting. Second, if the vibrating screen 52 was configured to separate core pieces from leaf pieces, there would be no need to use the air stream.

Thus, the vibrating feed screen does not separate the core pieces from the leaf pieces. Instead, the vibrating feed screen separates the non-lettuce material from the mixture of core and leaf pieces. The air stream separates the core and leaf pieces.

In the final Office Action of October 8, 2008, the Examiner asserts that "Hofmeister discloses a slicer for cutting vegetables into core and leaf pieces, to which it is generally known in the field of the art that products of various size can be separated using screens of predetermined size to separate dimension." However, as discussed above, Hofmeister specifically discloses separating core pieces from the mixture of core and leaf pieces based on density using an air stream rather than the screen, which is used to separate non-lettuce material from the mixture. Thus, the explicit disclosure of Hofmeister is contrary to the Examiner's assertion regarding what is generally known in the field of the art.

2. Hauch Fails to Disclose Screens to Separate Shredded Vegetable Pieces

In the final Office Action of October 8, 2008, the Examiner asserts that "Hauch teaches the separation of the core and leaf pieces by dimension." Applicant assert that the Hauch reference clearly discloses a trammel with screening section for **grains, rocks, or stones**. (Column 3, lines 1-13.) The Hauch reference makes no mention of core and leaf pieces. Thus, the Hauch reference does not disclose one or more screens that separate core pieces from leaf pieces as recited in the independent claims.

3. Proposed Modification Improperly Changes Principle of Operation of Hofmeister

Applicants assert that Examiner has failed to establish a *prima facie* case of obviousness because the Examiner's proposed combination requires modifying the principle of operation of the Hofmeister reference. MPEP 2143.01(VI) states, "[i]f the proposed modification or combination of the prior art would **change the principle of operation** of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious." (Emphasis added.)

Because the Hofmeister discloses separating core pieces and leafy pieces based on their densities using an air stream, Applicants assert that the Examiner's proposed modification to use screens to separate core pieces and leafy pieces based on their dimensions would change the principle of operation of the gravity/air separating device 20 disclosed in the Hofmeister reference. Additionally, because the vibrating screen 52 in device 20 is used to separate out non-lettuce material (nuts, bolts, pieces of wood, etc.) from lettuce material (e.g., core pieces and leafy pieces), Applicants assert that the Hofmeister reference teaches away from using screens to separate core pieces and leafy pieces.

B. Claims 9-13 Rejected Under 35 U.S.C. § 103(a)

Claims 9-13 stand rejected under 35 U.S.C. 103(a) as being unpatentable over the Hofmeister reference in view of the Jacobson reference an din further view of U.S. Patent No. 6,637,600 (the Miyamoto reference). Applicants assert that claims 9-13 are allowable for at least the reason that they depend from an allowable independent claim.

C. Conclusion

For the forgoing reasons, Applicant requests reversal of the Examiner's rejections of claims 1, 3-16, and 19-24.

VIII. CLAIMS APPENDIX

A list of the claims involved in the present appeal is attached hereto as Appendix A.

IX. EVIDENCE APPENDIX

None.

X. RELATED PROCEEDINGS APPENDIX

None.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, Applicants petition for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 145642000100. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Dated: May 8, 2009

Respectfully submitted,

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APPENDIX A

1. A system for separating shredded vegetable pieces comprising:

a) a slicer configured to cut a vegetable having a leaf portion and a core portion into a plurality of pieces of the leaf and core portions to form a mixture of leaf pieces and core pieces; and

b) a sorting mechanism having an infeed end and a discharge end, wherein the sorting mechanism comprises one or more screens having a plurality of screen apertures, wherein the plurality of screen apertures have a shape and size suitable to separate the core pieces from the mixture based on their dimensions.

3. The system of claim 1 wherein the plurality of screen apertures are rectangular in shape.

4. The system of claim 3 wherein the rectangular apertures measure about 2.5 cm (about 1 inch) in length to about 1.6 cm (about 5/8 inch) in width.

5. The system of claim 1 wherein the one or more screens comprises a series of screens having a plurality of apertures between the infeed end and the discharge end, and wherein the apertures of one or more screens differ in shape and size from the apertures of other screens in the series.

6. The system of claim 1 further comprising a feed shaker that transports the mixture from the slicer to the sorting mechanism.

7. The system of claim 6 wherein the feed shaker is configured to vibrate to facilitate uniform distribution of the mixture on the feed shaker.

8. The system of claim 7 wherein the feed shaker is configured to vibrate to further facilitate uniform distribution of the mixture on the sorting mechanism.

9. The system of claim 6 wherein the feed shaker includes an end, and wherein the end of the feed shaker and the sorting mechanism form a non-bias feed arrangement, and wherein the mixture is transported from the feed shaker onto the sorting mechanism through the end of the feed shaker.

10. The system of claim 6 wherein the feed shaker includes an end, and wherein the end of the feed shaker and the sorting mechanism form a bias angle, and wherein the mixture is transported from the feed shaker onto the sorting mechanism through the end of the feed shaker.

11. The system of claim 10 wherein the bias angle is between about 0° to about 90°.

12. The system of claim 10 wherein the bias angle is between about 45° to about 90°.

13. The system of claim 10 wherein the bias angle is greater than 90°.

14. The system of claim 1 wherein the vegetable is a cabbage.

15. A system for separating shredded vegetable pieces comprising:

a) a slicer configured to cut a vegetable having a leaf portion and a core portion into a plurality of leaf pieces and core pieces to form a mixture of leaf and core pieces;

b) one or more screens having a plurality of screen apertures, wherein the plurality of screen apertures have a shape and size suitable to separate core pieces from the mixture based on their dimensions; and

c) a feed shaker that transports the mixture from the slicer to the sorting mechanism.

16. A mechanical method for separating shredded vegetable pieces comprising:

a) providing a vegetable having a leaf portion and a core portion;

b) cutting the leaf and core portions into a plurality of leaf pieces and core pieces to form a mixture of leaf and core pieces;

c) feeding the mixture to a sorting mechanism having an infeed end, a discharge end, and one or more screens, wherein the one or more screens have a plurality of screen apertures; and

d) separating core pieces from the mixture based on their dimensions using the one or more screens.

19. The mechanical method of claim 16 wherein the plurality of screen apertures are rectangular in shape.

20. The mechanical method of claim 19 wherein the rectangular apertures measure about 2.5 cm (about 1 inch) in length to about 1.6 cm (about 5/8 inch) in width.

21. The mechanical method of claim 16 wherein the one or more screens comprises a series of screens having a plurality of apertures between the infeed end and the discharge end, and wherein the apertures of one or more screens differ in shape and size from the apertures of other screens in the series.

22. The mechanical method of claim 16 wherein the step of separating comprises passing leaf pieces through the apertures into a collection pan, and thereafter, into a first tank, and channeling core pieces that remain on the one or more screens to a second tank.

23. The mechanical method of claim 16 further comprising the step of packaging the mixture without the core pieces.

24. The mechanical method of claim 16 wherein the vegetable is a cabbage.